



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,490	11/03/2000	Rainer Bruhn	VAL-500-A	6485

7590 05/28/2002
Young & Basile PC
3001 West Big Beaver Road
Suite 624
Troy, MI 48084-3107

EXAMINER

LE, DANG D

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/706,490

Applicant(s)

BRUHN

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,7-10 and 13-18 is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,11,12,19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3, 5, 6, 11, 12, 19 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 6, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ciolli (U. S. Pat. No. 5,573,472).

Regarding claim 1, Ciolli shows a tube motor (Figures 1-4) with an electric motor drive (14) with a drive shaft (not shown) located in a motor housing (not shown), a reducing gear (44', Figure 4) with a driven shaft (26') coupled with the drive shaft (not shown) via a gear input shaft (18 with gear 28, Figure 2), a gear box (12', Figure 4) supporting the reducing gear (44') and the driven shaft (26') and, for rotary securing of the driven shaft (26') especially when the electric motor drive (14) is disengaged (because of bearings 156 and 38'), a wrap-spring brake (90') working against the gear box (12'), characterized in that, mounted free of torsion on the gear box (Figure 3) and positioned between the wrap spring and the gear box (Figure 4) is an annular element

Art Unit: 2834

162
(16) which diverts into the gear box a moment of torsion introduced by the driven shaft (column 9, lines 25-33).

Regarding claim 2, it is noted that Ciolli also shows inner side of the gear box having an inner toothing (164) and a jacket surface of the annular element facing toward the inner side of the gear box having a corresponding inner toothing (162).

Regarding claim 3, it is noted that Ciolli also shows the annular element (160) can be locked into the gear box (12').

Regarding claim 5, it is noted that Ciolli also shows the reducing gear having a planetary gear drive (48'), while the planetary gear drive has a sun wheel (46') as a gear input shaft.

Regarding claim 6, it is noted that Ciolli also shows the planetary gear drive having planets (64'), which roll off on the inner toothing (68') on the inner side of the gear box (12').

Regarding claim 19, it is noted that Ciolli also shows the electric motor drive, the drive shaft, the motor housing, the reducing gear, the driven shaft, the wrap spring brake and the gear box can be locked together for the installation of the tube motor (Figure 1).

Regarding claim 20, it is noted that Ciolli also shows in a tube motor (Figures 1-4) including an electric motor drive (14) mounted on a drive shaft (Figure 1) and located in a motor housing (not shown), a reducing gear (44', Figure 4) coupling the drive shaft (Figure 1) with a driven shaft (26') via a gear input shaft (18 with gear 28, Figure 2) and

a gear box (12', Figure 4) supporting the reducing gear (44') and the driven shaft (26'),
the improvement comprising:

- A wrap-spring brake (Figure 4) including:
- A wrap-spring (90'); and
- An annular element fixedly mounted (162, 164) in the gear box (12') and surrounding the wrap spring, the annular element absorbing a moment of torsion resulting from the effort of the driven shaft (26') to rotate opposite a direction of rotation of the electric motor drive (column 9, lines 25-33).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciolli in view of Ozaki (4,587,450).

Regarding claim 11, Ciolli shows all of the limitations of the claimed invention except for the sun wheel having a core, the core and the sun wheel comprising different materials.

Ozaki shows the sun wheel (4) having a core (5), the core and the sun wheel comprising different materials for the purpose of making a rotor with gear.

Since Ciolli and Ozaki are all from the same field of endeavor, the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the sun wheel with a core and the core and the sun wheel with different materials as taught by Ozaki for the purpose discussed above.

Regarding claim 12, it is noted that Ozaki also shows the core (Figure 6b) having one of a hexagonal cross section and a Torx cross section.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted of prior art in view of Shimanckas.

Regarding claim 20, this claim is written in Jepson format. As a result, it is noted that the applicant's admitted of prior art shows in a tube motor including an electric motor drive mounted on a drive shaft and located in a motor housing, a reducing gear coupling the drive shaft with a driven shaft via a gear input shaft and a gear box supporting the reducing gear and the driven shaft.

The applicant's admitted of prior art does not show:

- A wrap-spring brake including:
- A wrap-spring; and
- An annular element fixedly mounted in the gear box and surrounding the wrap spring, the annular element absorbing a moment of torsion resulting from the effort of the driven shaft to rotate opposite a direction of rotation of the electric motor drive.

However, for the purpose of absorbing a moment of torsion, Shimanckas shows:

- A wrap-spring brake (Figure 3) including:
- A wrap-spring (57); and

- An annular element (59) fixedly mounted (61) in the gear box (17) and surrounding the wrap spring, the annular element absorbing a moment of torsion resulting from the effort of the driven shaft (111) to rotate opposite a direction of rotation of the electric motor drive (column 9, lines 25-33).

Since the applicant's admitted prior art and Shimanckas are all from the same field of endeavor, the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include a wrap-spring brake with a wrap-spring; and an annular element fixedly mounted in the gear box and surrounding the wrap spring, the annular element absorbing a moment of torsion resulting from the effort of the driven shaft to rotate opposite a direction of rotation of the electric motor drive as taught by Shimanckas for the purpose discussed above.

Allowable Subject Matter

7. Claims 4, 7-10, and 13-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: the record of prior art does not show a tub motor comprising:

- The annular element having one of locking hooks and locking indentations on its periphery which can be engaged together with one of locking indentations

and locking hooks respectively located on the inner side of the gear box as shown in claim 4.

- The side of the sun wheel facing toward the wrap spring having a plurality of circular lands curved in cross section, around which the wrap spring is positioned as shown in claim 7. Claims 8-10 and 13-18 are dependent.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

Application/Control Number: 09/706,490
Art Unit: 2834

Page 8

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
May 23, 2002

DL


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2834